

### ABSTRACT

A process for fabricating an electro-optic device is described that includes: a) providing a substrate comprising at least two polymer micro-ridges, where each polymer micro-ridge comprises an upper surface and two walls, and the two walls form an angle with a lower surface; b) depositing a metal thin film on the upper surface, the two walls, and the lower surface; c) etching a predetermined amount of the deposited metal thin film on the lower surface, thereby forming two electrodes separated by a gap; d) depositing a nonlinear optical polymer in the gap between the two electrodes; and e) poling the nonlinear optical polymer to induce electro-optic activity.

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